



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/649,265	08/28/2000	Chih-Yuan Chang	LUCENT-01500	6764
28960	7590	05/17/2005	EXAMINER	
HAVERSTOCK & OWENS LLP 162 NORTH WOLFE ROAD SUNNYVALE, CA 94086			NGUYEN, HANH N	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/649,265

Applicant(s)

CHANG ET AL.

Examiner

Hanh Nguyen

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Response filed on 11/26/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,9-19,22-28,30-33 and 36-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,9,15-19,22,28,30-33,36,42-44,46-50,52-56 and 58-60 is/are rejected.
- 7) ☒ Claim(s) 10-14,23-27,37-41,45,51 and 57 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 15, 16, 22, 28, 30, 31, 36, 42-44, 46-50, 52-56 and 58-60 are rejected under 35 USC 103(a) as being unpatentable over Cadd et al. (6,353,617 B1) in view of Lee (Pat. 5,892,769).

In claims 1, 15, 22, 28, 31, 36, 43, 49, 55 and 60, Cadd et al. discloses a method of integrating a scheduling algorithm in a wireless network shared by a plurality of users comprising the step of generating one or more contention (increase the number of contention slot when a collision occurs in any contention slot, col.3, lines 50-60, fig.2); allocating a first number of contention slots slots (a series of contention slots 2 to slots 50 in frame 28, fig.1, col.3, lines 7-30) according to a request and grant mode (call setup via control slot 20, see col.3, lines 10-15), wherein the first number is determined by a number of user access requests; allocating a second number of contention slots according to a contention mode (contention slots 1 in frame 28, fig.1, col.3, lines 7-30), and dynnmically adjusting the first number of contention slots according to a change in the number of users requesting access (the number of contention slots per frame can be adjusted based upon the number of collisions occur in a preceding frame or contention slots, col.3, lines 25-30 & 50-63 & abstract). Cadd et al. does not disclose each

Art Unit: 2662

one of the number of user access requests corresponds to a different one of the first number of contention slots; and prioritizing the first number of contention slots and the second number of contention slots. Lee discloses each one of the number of user access requests corresponds to a different one of the first number of contention slots (fig. 1 discloses a user having data ready for transmission entering a contention state 104 and reserved a schedule to transmit data message in a data slot., see col.6, lines 20-25). Lee further discloses prioritizing the first number of contention slots and the second number of contention slots (higher priority users are favored over lower priority users to transmit reservation messages for slot, col.5, lines 25-35 & col.6, lines 30-38). Therefore, it would have been obvious to one ordinary skilled in the art to modify the Cadd et al. by having each user scheduled to transmit data in a slot in according to the user 's priority level suggested by Lee in order to grant slot to higher priority user.

In claims 3, 16 and 30, Cadd et al. discloses at least one contention slot is allocated according to the contention mode at all times (Fig. 2 discloses that there is always at least one contention slot retained in a frame, col.3, lines 25-30).

In claims 46, 52 and 58, the limitations of these claims have been addressed in claim 1. (each of contention slots is associated with a unique user marking a request).

In claims 44, 50 and 56, the limitations of these claims have been addressed in claims 1, 15 and 28

Claims 9, 22, 36 are rejected under 35 USC 103(a) as being unpatentable over Cadd et al. (6,353,617 B1) in view of Lee (Pat. 5,892,769), and further in view of Zimmerman et al.(pat. 6,785,252 B1).

In claims 9, 22 and 36, Cadd et al. does not disclose each of the generated one or more

Art Unit: 2662

contention slots provides access to a weighted fair queue. Zimmerman et al. discloses, in fig.12, a weighted fair queue allocating a portion of bandwidth to a connection request (see col.22, lines 15-30). Therefore, it would have been obvious to one ordinary skilled in the art to modify the Cadd et al. by using the weighted fair queue suggested by Zimmerman et al. in order to provide access to contention slot.

Claims 4-6, 17-19 and 31-33 are rejected under 35 USC 103(a) as being unpatentable over Cadd et al. (6,353,617 B1) in view of Lee (Pat. 5,892,769), and further in view of Prieto, Jr. et al.(Pat. 6,381,228 B1).

In claims 4-6, 17-19 and 31-33, Cadd et al. does not disclose the sum of the percentage value is 100%, the percentage value is a dynamically changing value. Prieto, Jr. et al. discloses each user requesting slot is reserved a fraction of available bandwidth (a percentage value is assigned to each of the slotted multiple access mode). See col.10, lines 15-20. User one has 50% of the bandwidth, users 2 &3 has 25% of the bandwidth each (sum of the percentage value is 100%). See col.10, lines 40-45. The percentage of the bandwidth may be changed in accordance with rate, network load (the percentage value is a dynamically changing value). See col.10, lines 45-65. Therefore, it would have been obvious to one ordinary skilled in the art to dynamically determine percentage values assigned for each contention mode and request & grant mode in the Cadd et al. et al. by using Prieto, Jr. et al.

In claims 42, 48 and 54, Cadd et al. discloses the second number of contention slots are fixed and predetermined (contention slot 1 always remains in a frame 28, see col.3, lines 24-30).

In claims 47, 53 and 59, Cadd et al. discloses that if the user does not continue to make a request, the contention slot associated with the user is removed to reduce the number of

Art Unit: 2662

contention slots (fig.2 discloses a contention slot is removed from the frame if no collision occurs, see col.3, lines 43-60).

Response to Arguments

Applicant's arguments with respect to claims 1, 3-6, 9-19, 22-28, 30-33 and 36-60 have been reconsidered.

Claims 1, 3-6, 9, 15-19, 22, 28, 30-33, 36, 42-44, 46-50, 52-56 and 58-60 but are moot in view of the new ground(s) of rejection.

Claims 10-14, 23-27, 37-41, 45, 51 and 57 are objected.

Allowable Subject Matter

Claims 10-14, 23-27, 37-41, 45, 51 and 57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claims 10, 23 and 37, the prior art does not disclose two new requests for generating contention slots are placed in the weighted fair queue when a collision occurs between two users.

In claims 12, 25, 39, the prior art does not disclose the weighted fair queue adjusts the rate of generating one or more contention slots automatically.

In claims 45, 51 and 57, the prior art does not disclose if multiple new user access requests cause a collision, a number of additional contention slots are generated according to the request and grant made, such that the number of additional contention slots corresponds to at

Art Unit: 2662

least a number of the multiple user access requests causing the collision thereby increasing the first number of contention slots by the number of additional contention slots.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ahmadi et al. (US Pat. No. 5,384,777) discloses Adaptive Medium Access Control Scheme for Wireless LAN.

Bauchot (US Pat. No. 5,970,062) discloses Method and Apparatus for Providing Wireless Access to an ATM network.

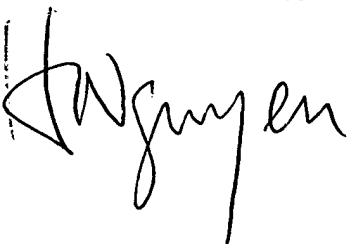
Lee et al. (US Pat. No. 6,529,520 B1) discloses Method and Device for Bandwidth Allocation in Multiple Access Protocols with Contention-Based Reservation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Friday from 8AM to 5PM. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HANH NGUYEN
PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Hanh Nguyen', is written over the printed name and title.